Geophysical Research Abstracts
Vol. 16, EGU2014-13292, 2014
EGU General Assembly 2014

Integrating Scientific Array Processing into Standard SQL

Dimitar Misev, Johannes Bachhuber, and Peter Baumann
Jacobs University Bremen, Germany

We live in a time that is dominated by data. Data storage is cheap and more applications than ever accrue vast amounts of data. Storing the emerging multidimensional data sets efficiently, however, and allowing them to be queried by their inherent structure, is a challenge many databases have to face today. Despite the fact that multi-dimensional array data is almost always linked to additional, non-array information, array databases have mostly developed separately from relational systems, resulting in a disparity between the two database categories. The current SQL standard and SQL DBMS supports arrays - and in an extension also multidimensional arrays - but does so in a very rudimentary and inefficient way. This poster demonstrates the practicality of an SQL extension for array processing, implemented in a proof-of-concept multi-faceted system that manages a federation of array and relational database systems, providing transparent, efficient and scalable access to the heterogeneous data in them.